



MATERIAL SAFETY DATA SHEET



24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE	
CHEMTREC: 800-424-9300	SHELL: 713-241-4819	1-800-240-6737

DIALA(R) OIL AX

SH MSDS: 60030 10 T 01/16/96

SECTION I

NAME

PRODUCT: DIALA(R) OIL AX
CHEM NAME: MIXTURE (SEE SECTION II A)
CHEM FAMILY: PETROLEUM HYDROCARBON; INDUSTRIAL DIELECTRIC OIL
SHELL CODE: 6870268738687456874669702

SECTION II A

INGREDIENTS

NO.	COMPOSITION	CAS NO.	PERCENT
P	DIALA OIL AX	MIXTURE	100
1	SEVERELY HYDROTREATED MIDDLE DISTILLATE	64742 46 7	50 100
2	SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-53-6	0-50
3	BUTYLATED HYDROXY TOLUENE	128-37-0	<0.2

NOTE: DIALA OIL CONTAINS NO DETECTABLE LEVELS (<1 PPM) OF PCB AS MEASURED BY ASTM D4059.

NFPA HAZARD RATING: HEALTH 0 FIRE 1 REACTIVITY 0

SECTION II B

ACUTE TOXICITY DATA

NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
2	>5 G/KG, RAT	>2 G/KG, RABBIT	NOT AVAILABLE

BASED UPON DATA AVAILABLE TO SHELL, COMPONENT 3 IN THIS PRODUCT IS NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

SECTION III

HEALTH INFORMATION

9160-01-142-5748
R400-3A7C01

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

EYE CONTACT: BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING PRODUCT IS PRESUMED TO BE NONIRRITATING TO THE EYES.

SKIN CONTACT: BASED ON ESSENTIALLY SIMILAR PRODUCT TESTING PRODUCT IS PRESUMED TO BE SLIGHTLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY RESULT IN VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, FOLLICULITIS OR OIL ACNE. RELEASE DURING HIGH PRESSURE USAGE MAY RESULT IN INJECTION OF OIL INTO THE SKIN CAUSING LOCAL NECROSIS.

INHALATION: INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST MAY CAUSE A MILD IRRITATION OF THE MUCOUS MEMBRANES OF THE UPPER RESPIRATORY TRACT.

INGESTION: INGESTION OF PRODUCT MAY RESULT IN VOMITING; ASPIRATION (BREATHING OF VOMITUS INTO THE LUNGS) MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS.

SIGNS AND SYMPTOMS: IRRITATION AS NOTED ABOVE. ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN); IN SEVERE CASES DEATH MAY OCCUR. LOCAL NECROSIS IS EVIDENCED BY DELAYED ONSET OF PAIN AND TISSUE DAMAGE A FEW HOURS FOLLOWING INJECTION.

AGGRAVATED MEDICAL CONDITIONS:

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT.

OTHER HEALTH EFFECTS:

THIS PRODUCT AND ITS COMPONENTS ARE NOT CLASSIFIED AS CARCINOGENS BY INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), NATIONAL TOXICOLOGY PROGRAM (NTP) OR OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

SECTION IV

OCCUPATIONAL EXPOSURE LIMITS

COMP NO.	OSHA PEL/TWA	PEL/CEILING	TLV/TWA	ACGIH TLV/STEL	OTHER
P	5 MG/M3x	NONE	5 MG/M3x	10 MG/M3x	

xOIL MIST, MINERAL

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: FLUSH EYES WITH WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER.

IF IRRITATION OCCURS, GET MEDICAL ATTENTION. IF MATERIAL IS INJECTED UNDER THE SKIN, GET MEDICAL ATTENTION PROMPTLY TO PREVENT SERIOUS INJURY.

INHALATION: REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION.

NOTE TO PHYSICIAN: IF MORE THAN 2.0 ML PER KG HAS BEEN INGESTED AND VOMITING HAS NOT OCCURRED, EMESIS SHOULD BE INDUCED WITH SUPERVISION. KEEP VICTIM'S HEAD BELOW HIPS TO PREVENT ASPIRATION. IF SYMPTOMS SUCH AS LOSS OF GAG REFLEX, CONVULSIONS OR UNCONSCIOUSNESS OCCUR BEFORE EMESIS, GASTRIC LAVAGE USING A CUFFED ENDOTRACHEAL TUBE SHOULD BE CONSIDERED.

SECTION VISUPPLEMENTAL HEALTH INFORMATION

AMOCO HAS REPORTED TO THE U.S. EPA PURSUANT TO SECTION 8(E) OF TSCA THAT A SAMPLE OF HYDROTREATED MIDDLE DISTILLATE (CAS REGISTRY NUMBER 64742-46-7) APPLIED REPEATEDLY TO THE SKIN OF EXPERIMENTAL ANIMALS OVER THEIR LIFETIME PRODUCED A WEAK TUMORIGENIC RESPONSE IN THE SKIN. THE FULL REFINING/PROCESS HISTORY OF THIS SAMPLE WAS NOT PROVIDED IN AMOCO'S SUBMISSION.

SECTION VIIPHYSICAL DATA

BOILING POINT (DEG F):	SPECIFIC GRAVITY (H2O = 1):	VAPOR PRESSURE (MM HG):
>300	0.8833	NOT AVAILABLE

MELTING POINT (DEG F):	SOLUBILITY IN WATER:	VAPOR DENSITY (AIR = 1):
-40 (POUR POINT)	NEGILIGIBLE	NOT AVAILABLE

VISCOSITY: 12
(CST @ 104 DEG F)

EVAPORATION RATE (NORMAL BUTYL ACETATE = 1): NOT AVAILABLE

APPEARANCE AND ODOR: WHITE LIQUID. SLIGHT HYDROCARBON ODOR.

PHYS/CHEM PROPERTIES: DIELECTRIC STRENGTH: 30 KV (MIN)

SECTION VIII

FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD: 295 DEG F (COC)

FLAMMABLE LIMITS/PERCENT VOLUME IN AIR: LOWER: N/AVA HIGHER: N/AVA

EXTINGUISHING MEDIA:

USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

SECTION IX

REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, OPEN FLAMES, AND OXIDIZING MATERIALS.

HAZARDOUS DECOMPOSITION PRODUCTS:

THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

SECTION X

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES.

PROTECTIVE CLOTHING

WEAR CHEMICAL-RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. NO SPECIAL EYE PROTECTION IS ROUTINELY NECESSARY.

TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

ADDITIONAL PROTECTIVE MEASURES:

SECTION XI

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES:

MAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. *** LARGE SPILLS *** WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ABSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. *** SMALL SPILLS *** TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.

SECTION XII

SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED.

SECTION XIII

TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION:
NOT HAZARDOUS BY D.O.T. REGULATIONS

DOT PROPER SHIPPING NAME:

OTHER REQUIREMENTS: FOR BARGE SHIPMENTS; USE CARGO INFORMATION CARD SCM 68701,
DIALA OIL.

SECTION XIV

OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA/TSCA INVENTORY OF CHEMICAL SUBSTANCES.

PROTECTION OF STRATOSPHERIC OZONE (PURSUANT TO SECTION 611 OF THE CLEAN AIR ACT AMENDMENTS OF 1990): PER 40 CFR PART 82, THIS PRODUCT DOES NOT CONTAIN NOR WAS IT DIRECTLY MANUFACTURED WITH ANY CLASS I OR CLASS II OZONE DEPLETING SUBSTANCES.

IN ACCORDANCE WITH SARA TITLE III, SECTION 313, THE ATTACHED ENVIRONMENTAL DATA SHEET (EDS) SHOULD ALWAYS BE COPIED AND SENT WITH THE MSDS.

SECTION XVSTATE REGULATORY INFORMATION

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES; OTHER PRODUCT SPECIFIC HEALTH AND SAFETY DATA IN OTHER SECTIONS OF THE MSDS MAY ALSO BE APPLICABLE FOR STATE REQUIREMENTS. FOR DETAILS ON YOUR REGULATORY REQUIREMENTS YOU SHOULD CONTACT THE APPROPRIATE AGENCY IN YOUR STATE.

STATE LISTED COMPONENT	CAS NO	PERCENT	STATE CODE
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SEVERELY HYDROTREATED LIGHT NAPHTHENIC DISTILLATE	64742-53-6	0-50	MA
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CA = CALIFORNIA HAZ. SUBST. LIST; CA65C, CA65R, CA65C/R = CALIFORNIA SAFE DRINKING WATER AND TOXICS ENFORCEMENT ACT OF 1986 OR PROPOSITION 65 LIST; CT = CONNECTICUT TOXIC. SUBST. LIST; FL = FLORIDA SUBST. LIST; IL = ILLINOIS TOX. SUBST. LIST; LA = LOUISIANA HAZ. SUBST. LIST; MA = MASSACHUSETTS SUBST. LIST; ME = MAINE HAZ. SUBST. LIST; MN = MINNESOTA HAZ. SUBST. LIST; NJ = NEW JERSEY HAZ. SUBST. LIST; PA = PENNSYLVANIA HAZ. SUBST. LIST; RI = RHODE ISLAND HAZ. SUBST. LIST.

VOLATILE ORGANIC COMPOUNDS (VOC): THIS PRODUCT IS EXEMPT FROM VOC REPORTING UNDER THE CALIFORNIA CLEAN AIR ACT. SECTION 94510 EXEMPTS ORGANIC COMPOUNDS THAT EITHER HAVE A VAPOR PRESSURE OF <0.1 MM HG @ 20 DEG C OR HAVE MORE THAN 12 CARBON ATOMS.

SECTION XVISPECIAL NOTES

MSDS SECTION II-A, XV AND EDS SECTION I REVISED TO SHOW CHANGED PERCENTAGE OF INGREDIENTS. EDS SECTIONS III AND IV WERE UPDATED. THE OSHA HAZARD EVALUATION AND REGULATORY STATUS OF THE PRODUCT HAVE NOT CHANGED. A SPANISH TRANSLATION OF THIS MSDS MAY BE OBTAINED BY CALLING 1-800-240-MSDS.

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

WE ARE PROVIDING OUR MOST RECENT MATERIAL SAFETY DATA SHEET AND/OR ENVIRONMENTAL DATA SHEET. IF YOU WISH TO RECEIVE UPDATES TO THIS INFORMATION, PLEASE CALL SHELL'S GENERAL MSDS ASSISTANCE LINE (713-241-4819) TO ENSURE THAT

YOU ARE ADDED TO SHELL'S REGULAR MSDS DISTRIBUTION SYSTEM.

BE SAFE. READ OUR PRODUCT
SAFETY INFORMATION...AND
PASS IT ON. (PRODUCT
LIABILITY LAW REQUIRES IT)

SHELL OIL COMPANY
PRODUCT SAFETY AND COMPLIANCE
P. O. BOX 4320
HOUSTON, TX. 77210

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PRODUCT NAME: DIALA(R) OIL AX

SH EDS: 60030 - 03

01/16/96

SECTION I | PRODUCT COMPOSITION

NO.	COMPOSITION	CAS	PERCENT
P	DIALA OIL AX	MIXTURE	100
1	SEVERELY HYDROTREATED MIDDLE DISTILLATE	64742-46-7	50-100
2	SEVERELY HYDROTREATED LIGHT NAPHTHENIC D ISTILLATE	64742-53-6	0-50
3	BUTYLATED HYDROXY TOLUENE	128-37-0	<0.2

SECTION II | SARA TITLE III INFORMATION

NO.	EHS RQ (x1)	EHS TPQ (x2)	SEC-313 (x3)	313 CATEGORY (x4)	311/312 CATEGORY (x5)
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BASED ON THE DATA AVAILABLE TO SHELL THIS PRODUCT IS NOT REGULATED BY SARA,
TITLE III

- x1 = REPORTABLE QUANTITY OF EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
x2 = THRESHOLD PLANNING QUANTITY, EXTREMELY HAZARDOUS SUBSTANCE, SEC 302
x3 = TOXIC CHEMICAL, SEC 313
x4 = CATEGORY AS REQUIRED BY SEC 313 (40 CFR 372.65 C), MUST BE USED ON TOXIC
RELEASE INVENTORY FORM
x5 = CATEGORY (FOR AGGREGATE REPORTING REQUIREMENTS UNDER SARA 311, 312)
HEALTH: H-1 = IMMEDIATE (ACUTE) HEALTH HAZARD
H-2 = DELAYED (CHRONIC) HEALTH HAZARD
PHYSICAL: P-3 = FIRE HAZARD
P-4 = SUDDEN RELEASE OF PRESSURE HAZARD
P-5 = REACTIVE HAZARD

SECTION III | ENVIRONMENTAL RELEASE INFORMATION

THIS PRODUCT IS AN OIL UNDER 49 CFR (DOT) PART 130. IF SHIPPED BY RAIL OR HIGHWAY IN A TANK WITH A CAPACITY OF 3,500 GALLONS OR MORE, IT IS SUBJECT TO THE REQUIREMENTS OF PART 130. MIXTURE SOLUTIONS IN WHICH THIS PRODUCT IS PRESENT AT 10% OR MORE MAY ALSO BE SUBJECT TO THIS RULE.

IF THIS PRODUCT BECOMES A WASTE, IT WOULD NOT BE A HAZARDOUS WASTE BY RCRA CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.

SHELL OIL COMPANY
P.O. BOX 4320
HOUSTON, TX 77210

FOR EMERGENCY ASSISTANCE PLEASE CALL
SHELL: (713) 473-9461
CHEMTREC: (800) 424-9300